

## Section 1 Mobile Device Measurements - Dead On Arrival (DOA)

### 1.1 Dead On Arrival (DOA)

#### 1.1.1 General Description and Title

DOA is comprised of three return rate measurements that cover the early life cycle of a product, after General Availability. These are:

- 1) DOA (DOA-07) – a measure of failed unit returns during the first 7 days after initial activation attempt.
- 2) DOA (DOA-14) – a measure of failed unit returns during the first 14 days after initial activation attempt.
- 3) DOA (DOA-30) – a measure of failed unit returns during the first 30 days after initial activation attempt.

#### 1.1.2 Purpose

These measurements are largely focused on North America and post-paid products. For global and pre-paid products, these measurements can be modified.

DOA returns are those returns, which a WIRELESS SUBSCRIBER returns within the first 7, 14 or 30 days of purchase.

All returns are tested, and then only the failing devices are counted in the Dead On Arrival (DOA) calculation.

Returns that pass testing will not be counted in the DOA measurement. Returns that have failed testing are counted in the DOA measurement.

#### 1.1.3 Applicable Product Categories

In general, these measurements apply to:

##### Mobile Devices

PC Code	Category Name	Definition
6.2.1.2.1	Feature Phone	A mobile phone that provides basic voice and text functions and may provide other features.
6.2.1.2.2	Smart Phone	A smartphone, or smart phone, is a mobile phone built on a mobile operating system, with more advanced computing capabilities than a feature phone.

#### 1.1.4 Detailed Descriptions

- 1) Terminology

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- a) Dead on Arrival (DOA), phone devices either returned as defective by WIRELESS SUBSCRIBERS to be swapped within fixed number of days of activation and new un-activated units returned as defective out-of-box.
  - b) Activation is the process that links (activates) a specific mobile phone serial number to an account and to a SERVICE PROVIDER network. SERVICE PROVIDERS can provide the initial date of activation if required for warranty or exchange purposes
  - c) Launch Month is the month a new model is launched to the first WIRELESS SUBSCRIBER
  - d) Test Failure is defined as failure to meet mutually agreed SERVICE PROVIDER and MANUFACTURER requirements
  - e) DOA reporting periods are 7, 14 or 30 days from attempt of first activation
  - f) WIRELESS SUBSCRIBER, the WIRELESS SUBSCRIBER of the mobile phone
  - g) SERVICE PROVIDER, the organization that sells the mobile services to the WIRELESS SUBSCRIBER.
  - h) MANUFACTURER, the organization that provides the mobile phone to the SERVICE PROVIDER to sell to the WIRELESS SUBSCRIBER. The MANUFACTURER is the entity that submits data for the benchmark.
  - i) WIRELESS SUBSCRIBER base refers to the defined group of customers that the phone SERVICE PROVIDER's measurement data encompasses. The phone SERVICE PROVIDER shall be responsible for ensuring the data reported for a given measurement contains only data from WIRELESS SUBSCRIBERS who are providing all needed information for that measurement, including where the phone SERVICE PROVIDER itself captures the WIRELESS SUBSCRIBER information, such as through the phone SERVICE PROVIDER's Technical Assistance Center, Customer Service Center, or monitoring systems.
- 2) MANUFACTURERS Responsibilities
    - a) Report performance data monthly to the individual SERVICE PROVIDERS as requested
    - b) Ensure that normalization values are accurate and representative of the DOA population
  - 3) Counting Rules
    - a) Units returned as DOA to the MANUFACTURER from the phone SERVICE PROVIDER shall be counted in the month they are returned.
    - b) Returned units that have failed triage test and were unable to be activated will also be counted
    - c) Units returned shall only be counted which have failed test
    - d) DOAs shall only be counted if they are returned within the appropriate 7, 14 or 30 day reporting periods
    - e) The MANUFACTURER shall report the DOA counts into three measurements
      - i. Those that were returned within 7 days of first attempted activation
      - ii. Those that were returned within 14 days of first attempted activation

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- iii. Those that were returned within 30 days of first attempted activation
- f) Number of Activations are for the appropriate DOA period (7, 14, or 30 days)
- g) DOA submission shall only include data for phone models that have reached general availability
- h) For SERVICE PROVIDERS that do not have a defined DOA policy period, their data will not be counted
- i) Activation data only includes post-paid activations
- 4) Counting Rule Exclusions
  - a) Units returned because of obvious shipping damage or WIRELESS SUBSCRIBER abuse shall not be counted
  - b) Units will not be counted if testing results report no trouble found (NTF)
  - c) Pre-paid phones are not counted in the DOA measurement
- 5) Calculations and Formulas
  - a) DOA measurements are reported monthly
  - b) Normalization is based on total phone activations since General Availability of the phone model or type
  - c) Should a Phone Service provider not provide enough detailed information for the DOA calculation, the units shipped to that SERVICE PROVIDER shall not be included in normalization values
  - d) General formula for normalized DOA is:  
DOA = DOA Returns / Units of first attempted activation

**Table 1.1-1 DOA Notation**

Identifier	Definition
DOAa	Normalization factor – the total number of phones activated in reporting month
DOA07r	Number of DOA returns from the 7 day activation period
DOA14r	Number of DOA returns from the 14 day activation period
DOA30r	Number of DOA returns from the 30 day activation period

**Table 1.1-2 DOA Measurement Identifiers and Formulas**

Identifier	Title	Formula	Note
DOA07	7 day DOA	100 x (DOA07r / DOAa)	%
DOA14	14 day DOA	100 x (DOA14r / DOAa)	%
DOA30	30 day DOA	100 x (DOA30r / DOAa)	%

- 6) Reported Data and Format, the MANUFACTURER shall
  - a) Submit data on measurements that are within the appropriate reporting period

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- b) Correct any data discrepancies, and resubmit corrected data for any erroneous data submitted
  - c) The DOA measurement shall be reported for each month and each product category with data elements, or equivalent as defined in Table 1.1-1
  - d) The phone SERVICE PROVIDER shall have the capability to report data by model type

#### 1.1.5 Sources of Data

As a part of its data systems, the phone SERVICE PROVIDER should have available the information listed above needed to calculate these measurements. This includes:

- a) Actual Activations – The number of devices activated by model. The data does not include failed activation attempts. Typically, this data is provided by the SERVICE PROVIDER to the MANUFACTURER.
- b) Launch Date – The Launch Date is set by the SERVICE PROVIDER and communicated to the MANUFACTURER
- c) DOA – The DOA data is collected by the MANUFACTURER

#### 1.1.6 Ranges and Floors

- a) No ranges established
- b) No floors established

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**1.1.7 Examples**

Examples for submitting data for the DOA measurement are provided below. This data would be provided for 7, 14 or 30 day DOA as applicable. There should be separate submissions for 7, 14 or 30 day DOAs.

Month Since Launch	#DOA (DOA07r, DOA14r or DOA30r)	Activations and attempted first activations for the applicable month (for 7, 14 or 30 day DOA as applicable) (DOAa)	Calendar Month	Description
1	100	10,000	January	1.00%
2	160	25,000	February	0.64%
3	90	20,000	March	0.45%
4	95	20,000	April	0.48%
5	90	18,000	May	0.50%
6	120	20,000	June	0.60%
7	100	20,000	July	0.50%
8	70	15,000	August	0.47%
9	96	19,000	September	0.51%
10	108	22,000	October	0.49%
11	66	15,000	November	0.44%
12	40	10,000	December	0.40%

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